



Department of Energy

Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

9103726

(XREF 9103710)

August 21, 1991

AUG 21 1991

91-ERB-157

Mr. Paul T. Day  
Hanford Project Manager  
U.S. Environmental Protection Agency  
712 Swift Boulevard, Suite 5  
Richland, Washington 99352

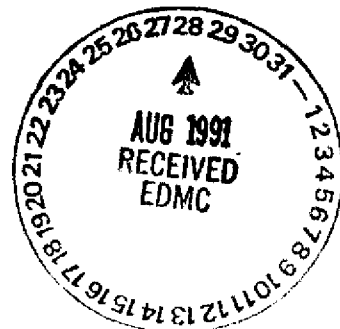
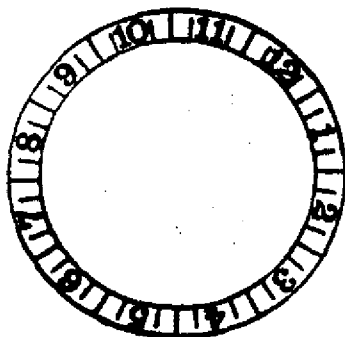
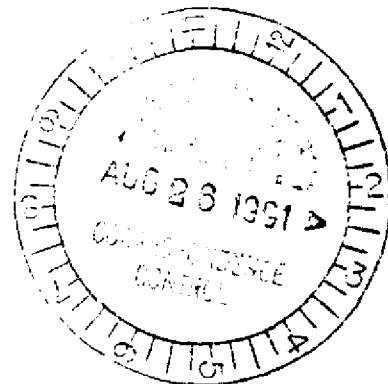
Mr. Timothy L. Nord  
Hanford Project Manager  
State of Washington  
Department of Ecology  
Mail Stop PV-11  
Olympia, Washington 98504-8711

Dear Messrs. Day and Nord:

HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (TRI-PARTY AGREEMENT)  
CHANGE NUMBER M-15-91-2, REVISION TO 1100-EM-1 OPERABLE UNIT (OU) MILESTONES  
M-15-01B AND M-15-01C

Attached for your approval is the subject Class II Tri-Party Agreement Change Control Form. This change control form was prepared to revise the milestones for delivery of the Remedial Investigation Phase II report and the Feasibility Study Phase III report for the 1100-EM-1 OU.

The proposed schedule change was discussed with the U.S. Environmental Protection Agency (EPA) and the State of Washington Department of Ecology (Ecology) during the recent informal dispute resolution meetings on July 23, 24, and 25, 1991. A draft copy of this request was provided on August 14, 1991, to the respective EPA and Ecology Unit Managers. This letter formally transmits the change request for your action.



Messrs. Day and Nord

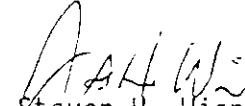
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91-ERB-157

AUG 21 1991

If you or your staff have any questions regarding the attached change control form, please contact Mr. Robert K. Stewart on (509) 376-6192 or FTS 444-6192.

Sincerely,

  
Steven H. Wisness  
Hanford Project Manager

ERD:RKS

Attachment

cc w/att:  
S. W. Clark, WHC  
J. C. Lehr, EM-442  
J. T. Stewart, USACE  
T. B. Veneziano, WHC

cc w/o att:  
W. G. Greenwald, USACE  
R. E. Lerch, WHC  
L. L. Powers, WHC

Change Number  M-15-91-2	<b>FEDERAL FACILITY AGREEMENT AND CONSENT ORDER CHANGE CONTROL FORM</b> <small>Do not use blue ink. Type, or print using black ink.</small>	Date  8/11/91						
<table style="width: 100%;"> <tr> <td style="width: 60%;">Originator  John T. Stewart</td> <td style="width: 40%;">Phone  376-9101</td> </tr> </table>			Originator  John T. Stewart	Phone  376-9101				
Originator  John T. Stewart	Phone  376-9101							
Class of Change <input type="checkbox"/> I - Signatories (Section 13.0) <input checked="" type="checkbox"/> II - Project Manager <input type="checkbox"/> III - Unit Manager								
Change Title  REVISION TO MILESTONES M-15-01B AND M-15-01C								
Description/Justification of Change  <p>Change Interim Milestone M-15-01B due date from Nov. 1991 to Dec. 1992.</p> <p>Change Interim Milestone M-15-01C due date from Apr. 1992 to Dec. 1992.</p> <p>Consolidate Interim Milestones M-15-01B and M-15-01C into Interim Milestone M-15-01B/C.</p>  <p>(See Page 2 for Justification of Change)</p>								
Impact of Change  <p>Deferral of Interim Milestones M-15-01B and M-15-01C.</p>								
Affected Documents  <p>The Hanford Federal Facility Agreement and Consent Order, Volume 2 dated March 1990, Appendix D, Table D-2 and Figure D-1.</p>								
Approvals      _____ Approved      _____ Disapproved  <table style="width: 100%;"> <tr> <td style="width: 40%;">DOE _____</td> <td style="width: 60%;">Date _____</td> </tr> <tr> <td>EPA _____</td> <td>Date _____</td> </tr> <tr> <td>Ecology _____</td> <td>Date _____</td> </tr> </table>		DOE _____	Date _____	EPA _____	Date _____	Ecology _____	Date _____	
DOE _____	Date _____							
EPA _____	Date _____							
Ecology _____	Date _____							

Description and Justification of Change

The change in schedule for TPA milestones M-15-01B and M-15-01C is requested to allow identified Remedial Investigation/ Feasibility Studies (RI/FS) activities to be accomplished and incorporated into a consolidated Final RI/FS Report for the 1100-EM-1 Operable Unit. Attachment 1 is a revised schedule outlining the activities to be accomplished and a submittal milestone (M-15-01B/C) for the Final RI/FS Report of December 1992.

Change Number M-15-91-1, Revision to Milestones M-15-01B and M-15-01C, was submitted June 20, 1991 and denied by EPA June 27, 1991 and by Ecology July 1, 1991. DOE-RL raised the issue to Formal Dispute in accordance with procedures outlined in the TPA. The Unit Managers met several times during the informal dispute resolution phase to discuss the dispute and attempt to reach resolution. These meetings resulted in agreement on the scope of RI/FS activities remaining to complete this project, and approximate durations for each. Attachment 2 is the meeting minutes and list of agreements.

EPA and Ecology Project Managers agreed with and supported their respective Unit Managers, but questioned whether DOE-RL had "Good Cause" for extending the TPA Milestones. Attachment 3 is a copy of the letter dated July 26, 1991 from EPA and Ecology Project Managers approving the Scope of remaining activities and the time durations associated with each, and presenting their concerns for approving a schedule extension.

Attachment 4 is the Dispute Statement, with submission letter, presenting the justified good cause arguments for the requested time extension.

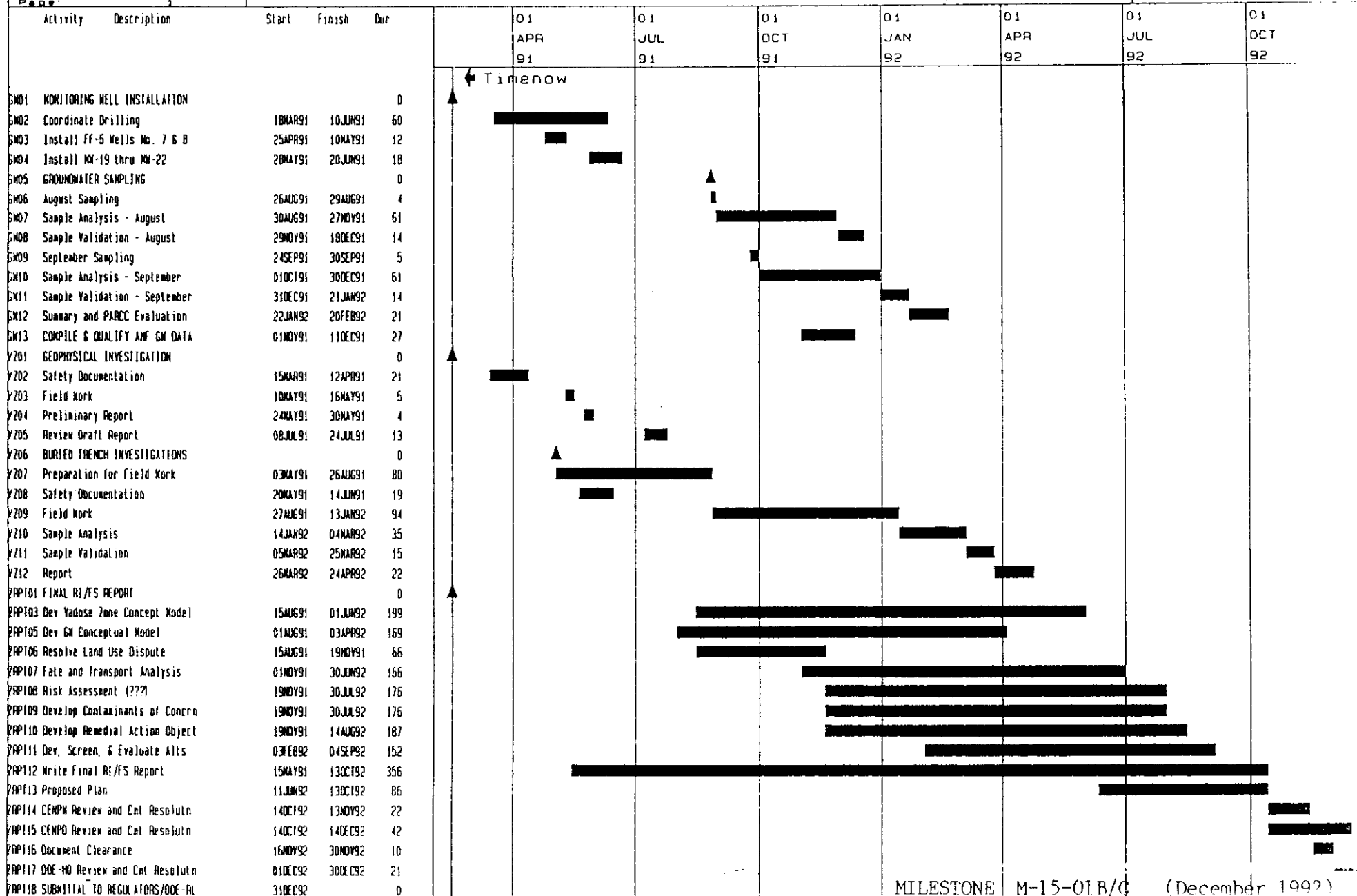
Attachment 1

1100-EM-1 Operable Unit Final RI/FS Schedule

OPEN PLAN (cm)  
 Report: GRAFBAR6  
 Project: 1100EM1  
 Time Now: 15FEB91  
 Date: 11AUG91  
 Time: 15:49:02  
 Page: 1

# 1100-EM-1 Operable Unit Final RI/FS Rpt

COE Walla  
 Walla  
 District



Legend  
 ■ -In progress  
 ■ -Planned  
 ■ -Critical

Bar Chart Key:

All characters represent 9 time unit (s)

MILESTONE M-15-01B/C (December 1992)

Signatures

Prep \_\_\_\_\_  
 Appv \_\_\_\_\_



August 14, 1991

Meeting Minutes Transmittal/Approval  
Dispute Resolution Informal Meetings: 1100-EM-1 Operable Unit  
EPA Hanford Project Office, Richland, Washington  
July 23, 24, 25, 1991

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FROM/APPROVAL: Robert K. Stewart Date 8/14/91  
Robert K. Stewart, 1100-EM-1 Operable Unit Manager (DOE-RL)

APPROVAL: David R. Ginn Date 14 Aug 91  
Dave Elnan, 100-EM-1 Unit Manager, EPA

APPROVAL: Richard B. Hibbard Date 8/14/91  
Richard Hibbard, 1100-EM-1 Unit manager, WA Dept. Ecology

PREPARED BY: John T. Stewart Date 11 Aug 91

CONCURRENCE BY: John T. Stewart Date 15 Aug 91  
USACE Unit Manager

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Meeting summaries and agreements are attached. They include:

- Attachment #1 - July 23, 1991 Meeting Summary Agreements
- Attachment #2 - July 24, 1991 Meeting Summary Agreements
- Attachment #3 - July 25, 1991 Meeting Summary Agreements
- Attachment #4 - Proposed Project Schedule Charts



Attachment #1

Meeting Summary and Agreements  
Dispute Resolution Informal Meetings  
1100-EM-1 Operable Unit  
July 23, 1991

ATTENDEES:

<u>name</u>	<u>org.</u>
Paul Day	EPA
George Hofer	EPA
Dave Einan	EPA
Donna LaCombe	PRC
Tim Nord	Ecology
Rich Hibbard	Ecology
Ron Izatt	DOE-RL
Julie Ericson	DOE-RL
Bob Stewart	DOE-RL
John Stewart	USACE
Wendell Greenwald	USACE
Merl Lauterbach	WHC
Tim Veneziano	WHC
Linda Powers	WHC

1.0 GENERAL

The meeting started at 4:30 p.m. in the EPA conference room in Richland, Washington. The purpose of the meeting was to discuss the dispute with the TPA Project Managers, and investigate the potential for informal resolution. The meeting lasted until 9:00 p.m. Both the regulators and the DOE-RL project team discussed their positions on the dispute, and presented their respective perceptions of why there is a dispute. The value of the meeting was a better understanding of the other group. There appeared to be an excellent chance for informal resolution of the schedule portion of the dispute.

2.0 AGREEMENTS

2.1 The Project Managers agreed to separate the schedule issue from the risk assessment issues. This dispute will only involve the schedule. The Project Managers extended the informal dispute resolution period beyond the July 27, 1991 closure date (no time limit defined at this meeting), and the Unit Managers meet July 24, 1991 to resolve the schedule dispute issues. George Hofer and Paul Day authored the following direction to the Unit Managers (agreed to by all attendees):

- a. Develop scope of activity to complete RI/FS report. State objectives of report. Crisply identify issues of

disagreement.

b. Develop schedule to accomplish scope agreed to by three parties.

c. Basis for extension, presented by Energy, within context of TPA. I.e., present best efforts which were used to prevent or recapture this delay and the new information upon which an extension request is based.

2.2 Ron Izatt pointed out there is no vehicle for issue resolution in the TPA such as there is for schedule and suggested the Project Managers consider initiating a process to force closure on those contentious issues Unit Managers can not resolve. A separate issue paper for dispute will be prepared by DOE-RL for the risk assessment issues (landuse, reasonable maximum exposure values, and toxicity screening). This paper will be distributed to the Project Managers for their decision.

## Attachment #2

### Meeting Summary and Agreements Dispute Resolution Informal Meetings 1100-EM-1 Operable Unit July 24, 1991

#### ATTENDEES:

<u>name</u>	<u>org.</u>
Dave Einan	EPA
Donna LaCombe	PRC
Rich Hibbard	Ecology
Bob Stewart	DOE-RL
John Stewart	USACE
Wendell Greenwald	USACE
Steve Clark	WHC

#### 1.0 GENERAL

Discussion focussed on the detailed schedules included with the June 20, 1991 TPA Change Request and followed the Project Managers' direction of July 23, 1991 of developing scope, schedule, and basis for extension.

#### 2.0 AGREEMENTS

Discussions over the last several months resulted in the agreement by the Unit Managers to consolidate the RI 2 and FS III efforts and reports into one effort and Final RI/FS Report. The following was agreed to at this meeting by all parties.

##### 2.1 HRL Groundwater Investigation

Perform two rounds of groundwater sampling:  
1st round at end of August  
2nd round at end of September  
(full suite radio-chem analysis on both rounds)

##### 2.2 TCE Degradation Study

The object of this task is to study the variability of TCE with time. The 12 month analysis is scheduled to be complete in January 92. Continue and complete the study, insuring that it will not impact the schedule.

### 2.3 Treatability Tests

- a. The objective of this activity was to find a potential viable remedial option through the typical feasibility study process of identifying remedial objectives, and evaluating and selecting alternatives.
- b. Perform an in-depth literature search, Develop remedial alternatives, and Screen alternatives Focusing on effectiveness and costs in FS III Report. These items should be, but are not, in FS I & II Report. Finalize the FS I & II Report, and include these items in the Final RI/FS Report
- c. Unit Managers agreed b. above could be accomplished without treatability studies.
- d. Eliminate treatability studies from schedule.
- e. EPA and Ecology Unit Managers stated sedimentation is not a viable remediation alternative for the low contaminant concentrations in the HRL groundwater, and should not be considered further.

### 2.4 Collection of Background Data for ANF

- a. Contamination is one plume.
- b. Use existing ANF groundwater information in delineating the present extent of the plume for purposes of preparing the Final RI/FS Report. This sets the DQO's for the ANF portion of the plume for the report.
  - 1) DOE-RL will insist ANF data be collected meeting original 1100-EM-1 Work Plan requirements for DQO's.
  - 2) EPA and Ecology will provide comments regarding Data Quality on ANF-prepared RI/FS work plan.
- c. That DOE will request one more round of samples be taken by ANF from ANF wells (specified in DSI of 1 July 1991 by Wendell Greenwald) in September 1991.
- d. We will use sample data information from DOE-RL well MW-8 for background unless information comes in from ANF that another well is available for background sampling. If new information becomes available late, it may not be incorporated into the Final RI/FS Report.
- e. ANF Work Plan will not affect final RI/FS Report Schedule.

## 2.5 HRL Vadose Zone Characterization

Scope as presented on the schedule satisfactory.

## 2.6 Final RI/FS Report

a. Final RI/FS Report is a companion document to earlier reports. Information from earlier reports should be presented in some summary fashion (tables, charts, maps), using good footnote citation for references. In the body of the report shorten the reference to Work Plan, RI1, FSI&II, Work Plan Supplement, and describe the reference fully in the back of the report.

b. Delete the Sedimentation Jar Report and the ANF Investigation from the schedule.

c. Add "Review ANF Data" to the HRL Groundwater Investigation schedule.

d. Durations for USACE reviews (CENPW and CENPD) adjusted to minimize additional time to schedule. Unit Managers agreed some time is allowable for internal review.

e. Change "Reg & DOE Rev/Cmt Res 1st" to "Submit Final RI/FS Report and Proposed Plan", show it as a milestone, and show no activities after for the purposes of this schedule. When the schedule is prepared for the Work Plan Supplement it will show the remaining activities and this one will be 120 days long.

f. It was noted that EPA/PRC can accept the toxicity screening performed for this operable unit, with some reservations on lead.

## 2.7 Feasibility Study I & II Report

Finalize the FS I&II Report with respect to submitted EPA comments. Add the groundwater in the Final RI/FS Report.

## 2.8 RI/FS Work Plan Supplement

The scope of work for the WP Supplement is the scope of work defined today. The schedule for the WP Supplement will be the approved Change Request schedule. Finalization of the WP Supplement is dependent upon the Change Request, but efforts will start now with respect to submitted EPA comments.

## 2.9 Laboratory Analysis Duration

According to the Office of Sample Management laboratory radio-chem sample analysis will require 4 to 5 months in the near term (6 months?). The TPA, page 9-16, allows 2.5 to 3 months. Use the 5 months now because it appears to be the reality. A good justification will be required for the variance from TPA allowances. (Paul Day requested after the meeting we present a schedule with the 5 months lab time, and the 3 months lab time. Bob Stewart will discuss lab issue with OSM and DOE-RL management.)

## 2.10 Interim Remedial Measures

The IRM for the soil sites at the 1100-EM-1 Operable Unit will not be done.

## 2.11 HRL Vadose Zone Investigations

EPA/Ecology did not have information from USGS to form an opinion on the number of test pits necessary. They will contact USGS the morning of July 25, 1991, and this group will reconvene at 2:00 p.m July 25, 1991 to agree on scope and finalize duration discussions.

## 2.12 "Reports"

The need for preparation of several reports (at the end of groundwater investigations and vadose zone investigations in the HRL) was discussed. These reports compile and summarize the investigative effort technical data. Technical information reports are to be prepared, but the critical path does not include the final publication steps (generally the last week).

### Attachment #3

#### Meeting Summary and Agreements Dispute Resolution Informal Meetings 1100-EM-1 Operable Unit July 25, 1991

#### ATTENDEES:

<u>name</u>	<u>org.</u>
Dave Einan	EPA
Rich Hibbard	Ecology (telephonically)
Bob Stewart	DOE-RL
Wendell Greenwald	USACE
Steve Clark	WHC

#### 1.0 GENERAL

The meeting began at 2:00 p.m. at the EPA Hanford office in Richland to complete discussions between the Unit Managers concerning required RI/FS activities to complete the 1100-EM-1 Operable Unit.

#### 2.0 SPECIFIC ITEMS DISCUSSED

Ward Staubitz (USGS, geohydrology support to EPA) has recommended to EPA that the following test pits be excavated in the Horn Rapids Landfill to the indicated depths based upon his interpretation, and a review of Golder's interpretation, of the recent HRL geophysical surveys:

TP #	Depth (ft)
3 & 6	15-20
1,2,4,7 & 11	10-12
5 & 8	5-6

Four 20 feet deep testpits were assumed in the June 20, 1991 TPA Change Request with no excavations in high hazard locations such as the asbestos trench. The above recommendation increases the number of testpits to 9 while the quantity of excavated material remains approximately the same. Additionally, TP-8 is located in the asbestos trench. This work was tentatively agreed to contingent upon consulting the WHC Decommissioning and Decontamination Group (which will be performing much of the field work), and the appropriate safety personnel to accurately estimate the schedule impacts associated with the change in number and depth of test pits, and excavation within a

potentially high hazard location. The sequence of excavation of the test pits will be as prioritized by Golder and Associates at the July UMM except that TP-9 and TP-10 will not be excavated.

Requirements for the test pit sampling were agreed upon. The difficulties associated with sampling at set intervals as the excavation proceeded was discussed. The presence of construction debris and coarse soil materials may preclude taking samples at pre-established depths. It was agreed that a minimum number of samples would be collected from each test pit at appropriate locations to be determined by the field team leader. Agreed upon minimum number of samples are:

TP Depth	Number of Samples
15-20	4
10-12	2
5-6	1

The samples will be collected from the backhoe bucket as the material is excavated. This method of sampling will avoid having personnel in the pit and will expedite the work by alleviating some of the personal protective equipment and sloping for trench wall requirements. All samples will be CLP for metals, pesticides and PCB's. Alternate sampling and analysis for volatile and semivolatile organics will be considered if further evaluation determines that the method of collecting samples (disturbed samples from the backhoe bucket) would preclude getting representative results.

The schedule contained in a revised TPA Change Request will be based upon TPA allowed times for laboratory analysis. Bob Stewart stated that DOE could meet the upper limit of the TPA allowed times (90 days) for Uranium speciation. It may not be possible to achieve the TPA allowed times if the Regulators require analysis for the total spectrum of radionuclides.

The DOE, EPA and Ecology Unit Managers agreed that the remaining RT/FS activities for this operable unit require 17 months time duration from this date. This equates to a project completion date (Submission of the Final RI/FS Report to the Regulators) of December 1992. Task elements leading up to the Milestone date were discussed and appear on charts in Attachment 4. Several comments were made by Dave Einan regarding titles of work tasks and the general appearance of the chart. These recommendations are shown on the charts.

### 3.0 AGREEMENTS

#### 3.1 HRL Vadose Zone Investigations

- a. Nine testpits will will investigated, as outlined



above. (DOE reserves the right to review the scope of the test pit work contingent upon WHC field services and safety evaluations.)

### 3.2 RI/FS Schedule

- a. Use the TPA allowed times for laboratory analysis.
- b. Show project completion date, submission of the Final RI/FS Report to the Regulators, December 1992.

## 4.0 FOLLOW-UP ACTIONS

3.1 Determine feasibility of performing laboratory analysis for other than metals, pesticides and PCB's. (Wendell Greenwald)

3.2 Coordinate with the WHC Geosciences Group on accelerating the August ground water sampling. (Wendell Greenwald)

3.3 Initiate process with ANF on obtaining existing ground water analysis data.



Schedule Name: Ground Water-W/ TPA Lab Times

Project Manager:

As of date: 1-Aug-91 7:30pm Schedule File: A:GW-TPA

		91							92							93																	
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Status		1	1	1	1	3	1	1	3	1	1	2	2	3	2	1	1	1	1	3	1	1	2	1	4	1	1	1	3	1	1	2	1
a) MONITORING WELL INSTALL.	D M	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
b) Coordinate Drilling	C	b) ++++++	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
c) Install FF-5 Wells #7&#8	D	.	c) ==	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
d) Install MW-19 - MW-22	D	.	.	.d) ==	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
e) GROUND WATER SAMPLING	D M	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
f) Aug. Sampling	.	.	.	.	.	.	.	f) ==	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
g) Sampling Analysis (Aug.)	.	.	.	.	.	.	.	g) =====	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
h) Sample Validation (Aug.)	.	.	.	.	.	.	.	h) ==	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
i) Sept. Sampling	C	.	.	.	.	.	.	i) ==	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
j) Sample Analysis (Sept.)	C	.	.	.	.	.	.	.j) =====	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
k) Sample Validation (Sept.)	C	.	.	.	.	.	.	.k).==	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
l) Summary and PARCC Eval.	C	.	.	.	.	.	.	.l) ==	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.
m) COMPILE AND QUALIFY ANF GW	.	.	.	.	.	.	.	.m) ==	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.

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D Done                == Task                - Slack time (==--), or  
 C Critical            +++ Started task        Resource delay (---==)  
 R Resource conflict    M Milestone            > Conflict  
 p Partial dependency

Scale: Each character equals 1 week

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TIME LINE Gantt Chart Report

Schedule Name: Horn Rapids Landfill Vadose Zone Characterization

Project Manager:

As of date: 1-Aug-91 7:32pm Schedule File: A:HRL-VADO

		91												92												93											
		Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul						
Who	Status	1	1	1	1	3	1	1	3	1	1	2	2	3	2	1	1	1	1	3	1	1	2	1	4	1	1	1	3	1	1						
a) GEOPHYSICAL INVESTIGATION	D M	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
b) Safety Documentation	b) +++++	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
c) Field Work	D	.	.	c).==	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
d) Prilim. Report	D	.	.	d) ==	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
e) Review Draft Report	.	.	.	.	.	e).+++	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
f) BURIED TRENCH INVESTIG.	D M	.	.	.	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
g) Safety Doc.	.	.	.	g) ++++	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
h) Prep. for Field Work	C	.	.	h) ++++++	.	.	.		.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
i) Field Work	C	.	.	.	.	.	.	i) =====	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
j) Lab Analysis	C	.	.	.	.	.	.		.	.	.	j) =====	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
k) Lab Verification	C	.	.	.	.	.	.		.	.	.	.	.	k).====	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						
l) Report	C	.	.	.	.	.	.		.	.	.	.	.	l) =====	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.	.						

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D Done                    === Task                    - Slack time (==---), or

C Critical                +++ Started task            Resource delay (---==)

R Resource conflict       M Milestone            > Conflict

p Partial dependency

Scale: Each character equals 1 week

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TIME LINE Gantt Chart Report

Attachment 3

EPA and Ecology Letter, July 26, 1991



July 26, 1991

R. D. Izatt  
Deputy Assistant Manager for  
Environmental Management  
U.S. Department of Energy  
P.O. Box 550, (A5-22)  
Richland, Washington 99352

Re: Dispute Resolution Process at 1100-EM-1 Operable Unit

Dear Mr. Izatt:

A period of 30-days has expired since the Department of Energy (DOE) invoked the Dispute Resolution process regarding the remedial investigation/feasibility study (RI/FS) schedule for the 1100-EM-1 operable unit. DOE notified the Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) by letter, dated July 5, 1991, that it wished to invoke the process, in accordance with paragraph 50 of the Hanford Federal Facility Agreement and Consent Order, also known as the Tri-Party Agreement (TPA).

The basis for the dispute was EPA's and Ecology's denial of DOE's nine month schedule extension request for completion of the RI/FS at the subject operable unit. Basically, there were two reasons for EPA's and Ecology's denial. First, we did not agree with the scope of activities being proposed and the schedule that DOE believed would be necessary to complete those activities. Second, we were not convinced that a schedule extension was appropriate, irrespective of whether remaining work could be completed within the current schedule. The TPA requires that schedule extensions be based on good cause. We do not grant schedule extensions simply because a project is behind schedule.

In accordance with paragraph 50(B) of the TPA, the Project Managers and their supervisors are to meet as many times as necessary in a 30-day period to attempt to informally resolve the dispute. As you know, we have held several meetings recently with the goal of resolving the dispute. We believe that we have made significant progress in the area of three party agreement on the scope and duration of remaining work to complete the RI/FS. After extensive meetings over the past two days, the three Unit Managers agreed that if work began immediately, the RI/FS Report could be submitted to EPA and Ecology in December 1992. The Unit Managers adjusted the scope of the project during these meetings, in some cases eliminating scope, and in other cases, adding time for tasks that have just now been defined. The December 1992 date would represent an eight month delay to the original schedule. The EPA and Ecology Project Managers will stand behind the decisions made by the Unit Managers regarding the scope and duration of activities necessary to complete this project.

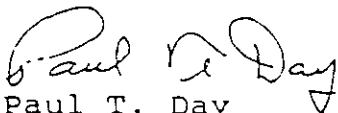
July 26, 1991

With the scope and duration defined from a technical basis, we must now address the policy issue of whether a schedule extension is appropriate. As previously stated, this decision must be based on whether good cause for an extension exists. The period for informal dispute resolution has now expired and this remaining issue will have to be addressed by the Dispute Resolution Committee (DRC), whose role is described in paragraphs 50(C)-(E) of the TPA. The EPA and Ecology Project Managers believe that it will be beneficial to involve the DRC in this matter. This is the first issue that has been raised to Dispute Resolution in over two years of TPA implementation. In that time, we have resolved many complex issues without entering Dispute Resolution. The fact that the Unit Managers, the Project Managers, and their supervisors have not been able to completely resolve this issue speaks to the complexity and the need for clear policy direction.

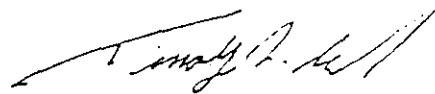
In accordance with agreements reached during our July 23, 1991 meeting, we suggest that DOE, as the disputing party, forward a written statement of dispute pertaining to the question of good cause to the DRC for resolution, no later than August 6, 1991. This will allow adequate time for DOE to finalize the statement of dispute to reflect very recent agreements. The DRC members for EPA and Ecology are Mr. Charles Findley and Ms. Narda Pierce, respectively. It is our understanding that you wish to have Mr. Willis Bixby represent DOE on the DRC, due to a departmental reorganization.

We would like to thank you and your staff for the professional and cooperative attitudes shown through the Dispute Resolution process. If you have questions on any of the above, please contact Mr. Paul Day at (509) 376-6623 or Mr. Tim Nord at (206) 438-7021.

Sincerely,



Paul T. Day  
Hanford Project Manager



Timothy L. Nord  
Hanford Project Manager

cc: S. Wisness, DOE  
W. Bixby, DOE  
R. Stewart/J. Erickson, DOE  
G. Hofer, EPA  
C. Findley/R. Smith, EPA  
D. Einar, EPA  
R. Stanley, Ecology  
N. Pierce, Ecology  
R. Hibbard, Ecology  
T. Veneziano/L. Powers, WHC  
J. Stewart/W. Greenwald, USACE  
Administrative Record -- 1100-EM-1 Operable Unit

Attachment 4

"Good Cause" Dispute Statement





## Department of Energy

Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

AUG 06 1991

91-ERB-151

Mr. Charles E. Findley  
Hazardous Waste Division  
U. S. Environmental Protection Agency  
Mail Stop HW-112  
Seattle, Washington 98101

Ms. Narda Pierce  
Waste Management  
State of Washington  
Department of Ecology  
Mail Stop PV-11  
Olympia, Washington 98504-8711

Dear Mr. Findley and Ms. Pierce:

### SUBMISSION OF DISPUTE STATEMENT FOR THE 1100-EM-1 OPERABLE UNIT

Enclosed is the Statement of Dispute for the 1100-EM-1 Operable Unit. The statement addresses only the issue of "good cause" for schedule extension. The Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Article XV requires the statement of dispute to be submitted to the Dispute Resolution Committee (DRC) within 30 days after notification of dispute. The 30-day period for this dispute was extended by 11 days by the U.S. Environmental Protection Agency (EPA) and the State of Washington Department of Ecology (Ecology) (letter dated July 26, 1991, from Mr. Paul Day and Mr. Tim Nord).

I believe that you may be generally aware of the issues surrounding the dispute regarding the requested schedule extension for 1100-EM-1 Remedial Investigation (RI) Phase II activities and the associated Phase III Feasibility Study (FS) Report. Nonetheless, I would like to provide you with an overview of the problem which may lead to a better understanding of the situation. This insight may best be obtained by examining a series of background questions.

1. What was the original schedule and what was that schedule based upon?

The original schedule required completion of RI Phase II and FS Phase II/III by November 1991, and April 1992, respectively. This schedule was developed with no specific definition of the work to be performed or knowledge of the contaminants which would be encountered. Because of the limited knowledge available at the time of the RI/FS Work Plan issuance, a schedule was set based upon an estimate that the Phase II work scope and schedule would be 60 percent of the Phase I work scope and schedule.

2. What new information was obtained during Phase I which impacted the Phase II work scope or schedule?

The Phase I investigation identified trichloroethene and the presence of a radioactive element above background in the groundwater at the Horn Rapids Landfill. Information obtained during the Phase I investigation also indicated that the source of the groundwater contamination (both chemical and radioisotope) was likely from an offsite source, i.e., Advanced Nuclear Fuels. The Phase I investigation did not indicate the expected presence of carbon tetrachloride.

3. What was the impact of this new information?

Planned vadose drilling through trenches in the landfill was suspended due to safety concerns related to the potential presence of carbon tetrachloride drums and construction debris. Policy issues related to EPA vs. DOE Field Office, Richlands' (RL), responsibility for managing "potentially responsible party" (PRP) contacts and negotiations took several months to resolve. The need to replan the vadose drilling activities and to resolve the PRP issues resulted in delays to Phase II activities.

4. When and how was the Phase II work scope defined?

The Phase II work scope was originally defined in the draft supplemental work plan which was submitted to EPA and Ecology in October 1990. However, final agreement by the three parties on the work scope, and on the time duration required to accomplish the agreed upon scope, was not reached until late July 1991. The agreed upon work scope is estimated to equate to approximately 72 percent of Phase I activities as compared to the planned 60 percent.

5. Has RL acted in good faith and demonstrated good cause for a schedule extension?

Despite the delayed agreement on Phase II activities, RL proceeded with actions identified in the draft supplemental work plan, and on disputed work, keeping EPA and Ecology unit managers fully appraised of all actions which were underway. RL made every reasonable attempt to communicate problems with the regulators, to quickly resolve issues as they arose, and to resolve EPA and Ecology comments on the supplemental work plan.

6. Is the proposed schedule reasonable relative to the now agreed upon work scope?

EPA, Ecology, and RL unit managers worked together to develop a schedule which was reflective of the agreed upon work scope and

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Mr. Findley and Ms. Pierce

-3-

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which set forth reasonable durations of time for the completion of that scope. The three unit managers have agreed that the Phase II activities cannot be completed with less than an eight month extension. Based on these agreements and your letter of July 26, 1991, we have begun the task of implementing the agreed work scope. The unit managers deferred to the Project Managers to determine whether "good cause" exists to extend the schedule. The Project Managers, in turn, deferred the question to the DRC.

As you must know, RL contends that "good cause" does exist for a schedule extension. However, the original change request no longer reflects the work scope or schedule for the Phase II activities. As such, RL will be submitting a revised change request, per Article XXIX of the Tri-Party Agreement, by August 20, 1991. Your action on that change request will be dependent upon the resolution of whether "good cause" exists to grant an extension.

Due to recent organizational changes within RL, I have been designated as the RL representative to the DRC, with Mr. Willis Bixby as alternate. As such, I would like to propose that we meet here in Richland on Tuesday, August 13, 1991, 10:30 a.m., to discuss the issues associated with this dispute. Please contact me at (509) 376-5441 to schedule this meeting.

Sincerely,



R. D. Izatt, Assistant Deputy Manager  
for Environmental Management

ERD:RKS

Attachment

cc w/att:

S. W. Clark, WHC

P. T. Day, EPA

D. Einan, EPA

W. Greenwald, USACE

R. Hibbard, Ecology

G. Hofer, EPA

M. J. Lauterbach, WHC

R. E. Lerch, WHC

T. L. Nord, Ecology

L. L. Powers, WHC

C. R. Smith, EPA

R. F. Stanley, Ecology

J. T. Stewart, USACE

T. B. Veneziano, WHC

T. M. Wintczak, WHC

Administrative Record - 1100-EM-1 Operable Unit

STATEMENT OF DISPUTE  
for the 1100-EM-1 Operable Unit

1.0 NATURE OF DISPUTE

The basis for dispute is the contention by EPA and Ecology that "good cause" for DOE's request for an eight month schedule extension for the remaining work to be accomplished in the 1100-EM-1 Remedial Investigation/Feasibility Study (RI/FS) has not been shown. DOE contends that there is good cause for extension, and by submission of this Dispute Statement, is invoking Tri-Party Agreement (TPA) ARTICLE XL, Section 111.

This Statement of Dispute focuses only on the issues of "just cause" for schedule extension. By agreement of the three parties during the 30-day informal dispute phase, and based on the letter of July 26, 1991, from EPA and Ecology, it does not address other issues involved in the disapproval of the Change Control Form, "Revision to Milestones M-15-01B and M-15-01C" submitted to EPA/Ecology on June 20, 1991. These other issues (work scope and duration of activities) were resolved during the initial dispute period. However, the fact that they were in dispute is documented herein because of the impacts to "Work Affected" which occurred.

2.0 WORK AFFECTED

Invoking the TPA dispute process (which began June 27, 1991), has resulted in impacts to the following actions (TPA ARTICLE XXV, Section 83). The final impacts will be determined when the dispute is settled.

- 1) Finalization of the Remedial Investigation Phase II Supplemental Work Plan (Supplemental Work Plan) for the Hanford Site, 1100-EM-1 Operable Unit report (DOE/RL 90-37);
- 2) Finalization of the Phase I and II Feasibility Study report (Phase I and II FS Report) for the Hanford Site, 1100-EM-1 Operable Unit (DOE/RL 90-32);
- 3) Preparation of the Final Remedial Investigation/Feasibility Study report (Final RI/FS Report) for the Hanford Site, 1100-EM-1 Operable Unit; and
- 4) Interactions with Advanced Nuclear Fuels Corporation (ANF) regarding the scope of work development for groundwater investigation on their property.

### 3.0 STATEMENT OF POSITION

DOE's position is that there is justification for an eight month schedule extension. This justification includes undefined work scope, the RI/FS review and comment process, Regulatory acceptance of work and schedules, other legitimate causes of delays, and the efforts to recapture schedule.

#### 3.1. Undefined Work Scope

Originally, the scope of work to be accomplished in Phase II RI was defined only as being 60 percent of the work performed in Phase I. The scope of work to be accomplished in Phase II RI is now better defined and is greater and of longer duration than was anticipated in the work plan.

Tri-Party Agreement Milestones M-15-01B and M-15-01C were based on the 1100-EM-1 Work Plan, approved in August 1989. Generally, Phase I RI activities were well defined while the Phase II RI activities were undefined beyond being 60 percent of the scope and duration of Phase I. In recognition of the uncertainties surrounding Phase II activities, the work plan provided for future schedule changes, if necessary.

The actual scope for Phase II RI activities as now defined is approximately 72 percent of the Phase I RI scope. This is approximately a 12 percent increase in scope and justifies adding about two months to the original nine-month schedule for Phase II RI field work. While difficult to quantify, the inclusion of Advanced Nuclear Fuels (ANF) activities increases the percentage. The impacts of ANF activities are discussed later.

It must also be acknowledged that this was the first RI performed at Hanford. Some inefficiencies in the RI process resulting from a normal learning curve occurred as a result. While it is difficult to quantify the impact of these inefficiencies, it must be recognized as a valid contributor to slightly longer schedules.

#### 3.2 RI/FS Review and Comment Process

The review and comment resolution process also caused delays. EPA and Ecology October 1990 comments on the RI Phase I Report contained items considered contentious by DOE. DOE responded to the comments within thirty days, noting those comments which it disputed. The Unit Managers agreed to use the Supplemental Work Plan review and comment process to achieve resolution and closure on the disputed issues. The review and comment process on the Supplemental Work Plan did not result in resolution of the

disputed issues. Most of these issues were resolved in February 1991. Final agreement on scope of work was not complete until July 1991. The lengthy comment resolution time impacted the schedule.

Review comments are not considered direction until agreed upon by all parties. Therefore, some of the RI Phase II work could not be defined until the comments were resolved. DOE has an obligation to challenge comments which it feels could increase costs without significantly benefitting the investigation or cleanup process.

### 3.3. Regulatory Acceptance of Work and Schedules

The Regulatory Unit Managers have been active participants in the direction of the project and development of the scope of work and schedules. This specifically includes (1) implicit acceptance of the relocation of vadose zone wells in the Horn Rapids Landfill (HRL), and (2) the expressed agreement by the Unit Managers regarding a schedule extension during the months preceding submission of the Revision to Milestones request. In both cases, time could have been saved by earlier notifications of disagreement.

3.3.1 HRL Vadose Zone Wells - The decision was made not to drill boreholes in the potential contaminant sources (or cells) based on safety concerns identified as a result of a DOE audit and surveillance. It was decided to drill outside the cells. EPA and Ecology were notified of the selection of the vadose zone well sites and of the reasons for relocating the sites. The failure of either agency to disagree at the time of well installation or during the months following the well installation was taken as implicit approval of the well location changes.

HRL vadose zone intrusive activities were considered to be complete in January 1990. The need for additional investigations was not formally identified until Phase I RI comments were received from EPA and Ecology in October 1990. The final scope of the additional activities was not finalized until July 1991. This has resulted in a several month delay.

3.3.2 Unit Manager Discussions Regarding Schedule Extensions - The Unit Managers have agreed for several months that the original schedules for the Phase II RI and Phase III FS reports were not achievable. Revised schedules were presented to the Unit Managers for their information and review. The June 20, 1991, Revision to Milestones request was the result of many meetings, discussions, and negotiations among the Unit Managers. It was DOE's understanding that EPA and Ecology Unit Managers recognized the justification for the revision request and agreed to both the

scope and schedule, and planned to transmit this information to their respective project managers for final approval.

### 3.4 Other Legitimate Causes of Delays

Legitimate delays have been incurred by the identification of ANF as a potentially responsible party, the required compliance with DOE safety regulations, the nationwide problem today with timely performance of laboratory analysis, and the identification of generic site-wide cleanup issues.

3.4.1 ANF Identification - The identification of ANF as the potential source of contamination for the HRL groundwater plume caused delays starting in August 1990 when DOE requested EPA to take the lead in notifying ANF as a potentially responsible party. As late as November 1990 EPA and Ecology were still discussing how to handle the ANF situation. These delays were the result of resolving the issue of who should assume the lead in notifying ANF. This ultimately required the Department of Justice to determine that DOE has the lead role. Additional delays are the result of the many meetings and information exchanges with ANF over the last six months.

3.4.2 Safety Delays - A DOE Surveillance in September 1989 regarding health and safety for planned drilling in the HRL identified several serious concerns. This surveillance was conducted to ensure that health and safety practices planned for the 1100-EM-1 RI/FS work complied with OSHA and DOE requirements. Copies of the report were provided to EPA and Ecology. A result of the surveillance was a reassessment by WHC of the required drilling into the Horn Rapids Landfill. It was determined that drilling as required was too risky, primarily because of the risks of drilling into rebar in suspected construction debris and also because of the risks associated with penetrating suspected drums of carbon tetrachloride. Improvements made in the health and safety program as a result of the surveillance were real and important. There was an initial loss of about three months due to the surveillance. Some of this time was regained through overtime and weekend work by the drilling crews (see section 3.5). To meet the Phase I RI report submittal date, some of the Phase I investigation work was shifted to Phase II.

One result of the surveillance was new safety requirements for all Hanford Site hazardous waste drilling. These have required more time for drilling operations. DOE maintains that safety concerns should always be addressed, regardless of schedule impact, when worker safety is potentially in jeopardy.

3.4.3 Laboratory Analysis Delays - Securing analytical results

in the timeframes stipulated by the TPA have been difficult throughout the life of the 1100-EM-1 RI/FS. Recently, radiochemical sample analyses delays have been severe, stretching into several months. This nation-wide problem has caused delays to this project. Continued delays could affect the critical path schedule. DOE and WHC have worked actively to improve laboratory analysis times to avoid these problems.

3.4.4. Generic Site-Wide Issue Delays - The 1100-EM-1 Operable Unit is further along in the RI/FS process than any other operable unit on the Hanford Site. As such, several significant issues have been identified (and actions initiated to resolve them) that have site-wide applicability. Such issues have included the need for development and publication of applicable field procedures, streamlining of the DOE document clearance process, development of appropriate data quality objectives, the need for development of sitewide background information, the need for development of a Hanford Risk Assessment Methodology, and others. The resolution of these generic issues has diverted DOE, Regulator, and contractor management time from 1100-EM-1 work.

### 3.5 Efforts to Recapture Schedule

DOE has expedited efforts to regain schedule, including overtime for drilling for time lost from the DOE safety surveillance, and compressed-schedule work by the contractor preparing the Phase I RI Report. DOE has also expended considerable effort in proceeding with work associated with contentious issues. Work performed included that associated with the vadose zone investigation of the HRL and several efforts associated with the groundwater investigation of the HRL.

The Phase II RI field activities were started on schedule in "good faith" without either an approved Supplemental Work Plan or fully defined scope. In Unit Manager meetings, both the EPA and Ecology Unit Managers agreed to approve the Phase II RI field activities on a month-to-month basis until the Supplemental Work Plan was approved.

3.5.1 Vadose Zone Investigation of the HRL - DOE provided responses in December 1990 on comments provided by the regulators to the Supplemental Work Plan which disagreed with performing additional vadose zone investigation. But DOE did agree to initiate planning for geophysical investigation as part of a negotiated compromise. This agreement was followed in early January (prior to EPA direction letter January 23, 1991) with a meeting to reach agreement on the technical details of the investigation. Supporting Information shows the timeline for the significant number of activities supporting this investigation.



### 3.5.2 Groundwater Investigation of the HRL and ANF Areas -

Again, despite DOE's disagreement with the concept of further groundwater investigation of the HRL after it became known that the most likely source of the TCE contamination was ANF, DOE continued activities supporting continued investigation. DOE agreed to proceed with analyses of groundwater samples in November 1990. Additionally, DOE initiated activities in November and December 1990 to perform radiation surveys and soil gas surveys needed prior to further groundwater drilling and sampling. This work was done even though DOE had taken the position of discontinuing the investigation should it be shown that the groundwater contamination was caused by ANF; this could not be conclusively shown at the time. For practical purposes work was not discontinued and the RI Phase II field work started essentially on the schedule required by the Work Plan. The timeline of activities for the groundwater investigation is shown in Supporting Information.

Additionally, there were a significant number of coordination activities with ANF, the most significant being the December 1990 transmittal of a letter from the Assistant Manager of DOE-RL providing the legal basis for the DOE's conducting the CERCLA investigation on ANF property. Discussions with ANF continued despite disagreements to regulatory comments on the RI Phase I Report.

### 3.6 Summary of DOE Position

It is difficult to quantify the incremental impact of all the individual issues discussed above. However, several months of discussions and negotiations with the Regulator Unit Managers has resulted in agreement for an eight month extension to the current milestones.

DOE contends the arguments outlined herein justify good cause for the extension.

#### 4.0 SUPPORTING INFORMATION

The following information is attached to provide information and to support the arguments for good cause:

<u>Attachment No.</u>	<u>Item</u>
4.1	References
4.2	Chronology of Events

ATTACHMENT 4.1

REFERENCES

## REFERENCES

### Documents/Comments/Comment Responses:

Hanford Federal Facility Agreement and Consent Order, March 1990

Remedial Investigation/Feasibility Study Work Plan for the 1100-EM-1 Operable Unit, Hanford Site, Richland Washington, August 1989

Remedial Investigation Phase I Report (Draft), August 1990

- Regulatory Comments, October 16, 1990
- DOE-RL Responses to Comments, November 14, 1990

Remedial Investigation Phase 2 Supplemental Work Plan for the Hanford Site (draft), October 1, 1990

- Regulatory Comments, November 21, 1990
- DOE Responses to Comments, December 19, 1990

Remedial Investigation Phase 2 Supplemental Work Plan (Interim Final), April 1991

Feasibility Study Phase I/II Report (Draft), December 1990

- Regulatory Comments, February 25, 1991
- DOE Response to Regulatory Comments, March 20, 1991

Feasibility Study Phase I/II Report (Interim Final), April, 1991

### Other:

Meeting Minutes - 1100-EM-1 Operable Unit Managers' Meetings

Meeting Minutes - (draft) July 24, 25, 1991, Informal Dispute Meetings of 1100-EM-1 Unit Managers

Meeting Minutes - "Additional Geophysical and Remedial Investigations of the Horn Rapids Landfill in the 1100-EM-1 Operable Unit", January 14, 1991

Cost Account Plans/Authorizations, Westinghouse Corporation, 1989 - 1991

DOE-RL Audit of Health and Safety Compliance at the 1100-EM-1 Operable Unit, September 26 - 30, 1989; audit results transmitted by DOE-RL letter #89RB-206 of November 29, 1989, R. D. Izatt, Director, Environmental Restoration Division, to President, Westinghouse Hanford Company

DOE-RL Surveillance Report #ERD-89-RKS-11, "Health and Safety Review of Planned Drilling in the Horn Rapids Landfill", September, 1989

## REFERENCES

### Letters:

EPA, January 23, 1991, "1100-EM-1 Remedial Investigation", letter from Mr. David R. Einar, Unit Manager U.S. Environmental Protection Agency to Robert K. Stewart Unit Manager U.S. Department of Energy.

DOE, February 28, 1991, "Request for Clarifications and Documentation of Agreements Reached, 1100-EM-1 Remedial Investigation (RI)," letter from Mr. Steven H. Wisness, Hanford TPA Project Manager for the U.S. Department of Energy to Messrs. Paul T. Day, Hanford TPA Project Manager for the U.S. Environmental Protection Agency and Timothy L. Nord, Hanford TPA Project Manager, State of Washington, Department of Ecology.

EPA, May 30, 1991, "1100-EM-1 Remedial Investigation," letter from Mr. David R. Einar Unit Manager U.S. Environmental Protection Agency to Mr. Robert K. Stewart Unit Manager U.S. Department of Energy.

DOE, June 20, 1991, "Federal Facility Agreement and Consent Order, Change Number M-15-91-1, Revision to Milestones M-15-01B and M-15-01C," from Mr. Steven H. Wisness, Hanford TPA Project Manager for the U.S. Department of Energy to Messrs. Paul T. Day Hanford TPA Project Manager for the U.S. Environmental Protection Agency and Timothy L. Nord, Hanford TPA Project Manager, State of Washington, Department of Ecology.

EPA, June 27, 1991, "Extension Request for the 1100-EM-1 Operable Unit RI/FS Schedule," letter from Mr. Paul T. Day, Hanford TPA Project Manager for the U.S. Environmental Protection Agency to Mr. Steven H. Wisness, Hanford TPA Project Manager for the U.S. Department of Energy.

Ecology, July 1, 1991, "Extension Request for 1100-EM-1 Operable Unit RI/FS Schedule," letter from Timothy L. Nord, Hanford TPA Project Manager, State of Washington, Department of Ecology to Mr. Steven H. Wisness, Hanford TPA Project Manager for the U.S. Department of Energy.

DOE, July 5, 1991, "Extension Request for the 1100-EM-1 Operable Unit RI/FS Schedule," letter from Mr. Steven H. Wisness, Hanford TPA Project Manager for the U.S. Department of Energy to Messrs. Paul T. Day Hanford TPA Project Manager for the U.S. Environmental Protection Agency and Timothy L. Nord, Hanford TPA Project Manager, State of Washington, Department of Ecology.

EPA, July 26, 1991, "Dispute Resolution Process at 1100-EM-1 Operable Unit", Letter from Mr. Paul T. Day and Timothy L. Nord to Mr. R. D. Izatt, Deputy Assistant Manager for Environmental Management, U. S. Department of Energy

ATTACHMENT 4.2

CHRONOLOGY OF EVENTS

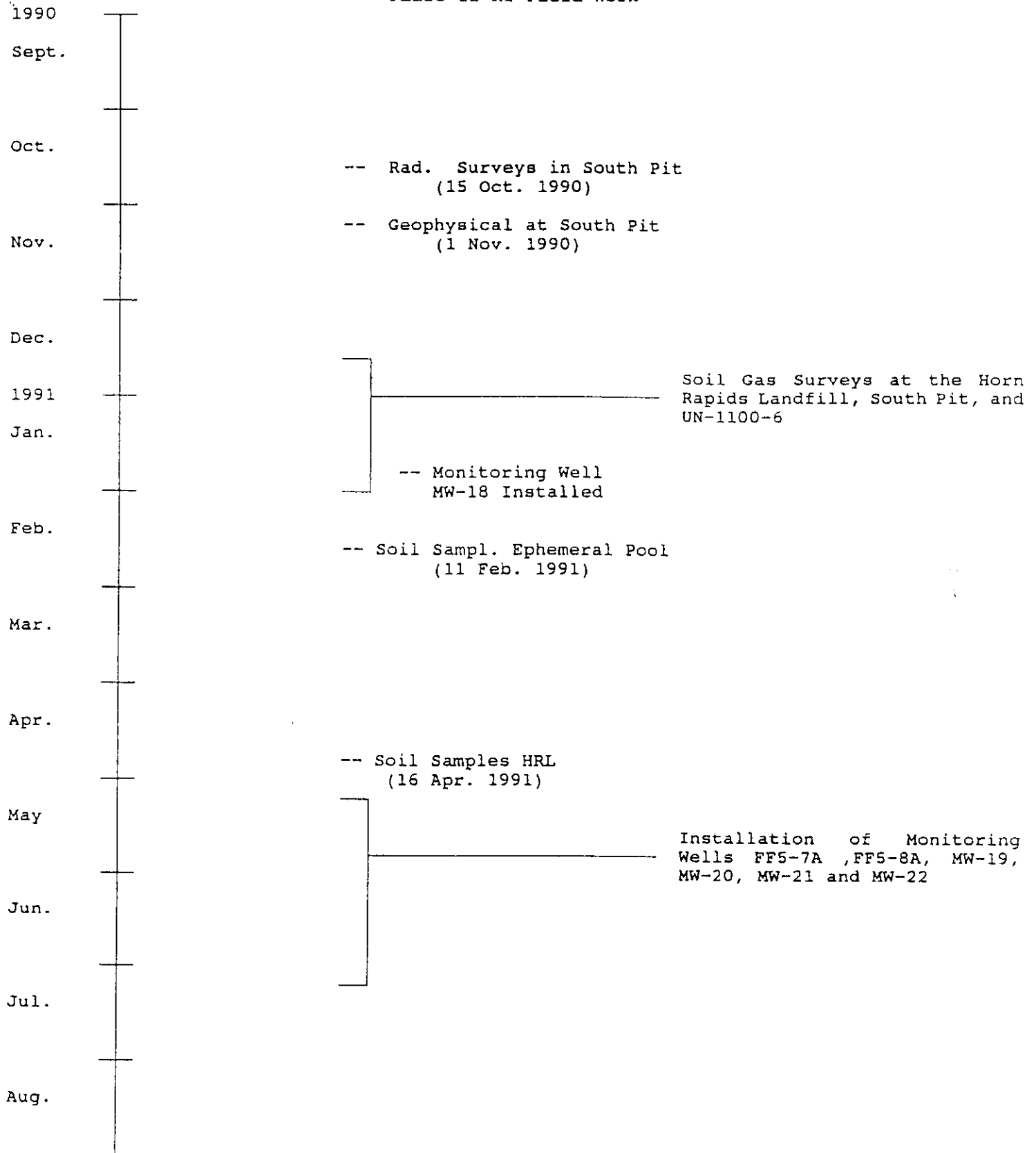
**Chronology of Events for  
HRL Investigations  
(from Phase I RI Report)**

1990 Aug.		-- Present HRL GW data to-- Regs. (15 Aug. 1990)	More data required prior to ANF participation
Sept.			
Oct.		-- Comments Received on RI I -- (16 Oct. 1990)	Initial Indication for Potential Re-Defined Scope
		-- Geophys. Surveys @ S. Pit (1 Nov. 1990)	
Nov.		-- Soil Gas Survey - HRL (1 Nov. 1991 - Jan. 91)	Agreement to Resolve RI Comments Through Comment Process on Supplemental Work Plan
		-- Comment Issue Meeting -- (UMM, 14 Nov. 1990)	
Dec.		-- Comments Received on WP (21 Nov. 1990)	
1991		-- Disposition of WP Comments -- (19 Dec. 1990)	Contentious Comments not Resolved (Geophy agrmt) Results presented @ UMM
Jan.		-- S.Pit Geophys Surv Present.-- (10 Jan. 1991)	
		-- Agreement on Geophys Scope (14 Jan. 1991)	DOE agrees to Ground Water Investigation and HRL burial trench Investg. Presented @ UMM Meeting With Regulators to determine details of Geophysical Investg. of HRL Burial Trenches Based on Soil Gas Result (proposed to Regulators) Preliminary modeling requested by EPA completed
Feb.		-- EPA Directed Action Letter (23 Jan. 1991)	
		-- Pre-Dispute Meeting -- (13 Feb. 1991)	
Mar.		-- HRL Soil Gas Results (20 Mar. 1991)	Special processing of Geophysical data requested to filter background interference
		-- Geophysical Plan Meeting --	
		-- Followup Geoph. Details	
Apr.		-- HRL GW wells located (16 April 1991)	Prep. SOW for Test Pits
		-- Forward Modeling Compl. --	
May		-- Geophy. Field Work	Ltd analysis results, presented to Regulators
		-- GW Well Installation (2 May - 28 June 1991)	
Jun.		-- Prelim. Rpt of Geophy Result-- (May UMM-24 May 1991)	Meet with Regulators to determine number of pits & priority of excavation (11 targets selected)
		-- Data Filtering	
Jul.		-- Draft Geophy. Rpt. (8 July 1991)	(2-5 months to completion depending on number of pits)
		-- GW Sample Results (17 July 1991)	
Aug.		-- Final Prep. Test Pits	
		-- Begin Test Pits @ HRL	

**Legend:**

WP = Supplemental Work Plan  
RI I = Phase I RI Report

Chronology of Events for  
Phase II RI Field Work



Legend:

WP = Supplemental Work Plan  
RI I = Phase I RI Report



Chronology of Interfaces with Advanced Nuclear Fuels (ANF)

8/5/91

Period Prior to DOE Receipt of Regulatory Comments on RI Phase I Report  
(Prior to October 16, 1990)

- o February, 1990 - Listing of information regarding ANF groundwater (GW) monitoring wells needed to quantify GW gradient and possible extent of contamination identified by WHC Remedial Investigation Coordinator
- o March 6, 1990 - Initial telephone call, Bob Stewart to ANF (Chuck Malody) regarding GW information. Malody reported that some information had been provided to Ecology (Chuck Cline), that Cline in turn had provided to WHC. Any additional information needed to be formally requested.

o March 20, 1990 - Formal letter to ANF requesting GW data transmitted. cc copies to EPA (Einan), Ecology (Cline)

NOTE: IT WAS DURING THIS TIME THAT AN ANF MEMO OF OCTOBER 31, 1986, BECAME AVAILABLE WHICH DOCUMENTED GW CONTAMINATION OF NITRATES, FLUORIDES, AND SULFATES. ADDITIONALLY, THE MEMO STATED THAT "CONTAMINANT LEVELS WERE JUDGED [BY ECOLOGY] NOT TO HAVE A DETRIMENTAL IMPACT ON THE PUBLIC DUE TO RESTRICTED LAND USE IN THE AREA (SOUTH PART OF THE 300 AREA AND NO EFFECT ON THE COLUMBIA RIVER, WHICH THE PLUME IS PROJECTED TO REACH IN 75 YEARS". FURTHER, THE MEMO STATED "THERE IS A NEED TO DETERMINE IF INDIVIDUAL WASTE STREAMS AND/OR THE COMBINED WASTES ARE DANGEROUS WASTE". (Note: THIS WAS NOT DONE; THE TRICHLOROETHYLENE (TCE) CONTAMINATION WAS FOUND AS A RESULT OF THE 1100-EM-1 REMEDIAL INVESTIGATION, PHASE 1.)

- o April 9, 1990 - requested data provided formally in letter; copies of letter provided informally to EPA (EINAN) and Ecology (Cline) at April 19, 1990 1100-EM-1 Unit Managers's Meeting
- o April 23, 1990 - Tel/cons, Bob Stewart, Chuck Malody, and Steve Clark (WHC Remedial Investigation Coordinator). Purpose was to discuss details of sampling planned May 7 -20, 1990. We agreed to provide copies of the WHC QA plan, applicable Environmental Investigation Instructions (EIIs) [procedures] for the sampling
- o May, 1990 - Several additional tel/cons, Bob Stewart, Chuck Malody, Steve Clark regarding details of the sampling/analyses
- o May 22, 1990 - Formal letter to ANF (Frain, VP) documenting agreements made and formally requesting specific constituents of interest. Copies to Einan, Cline
- o July 25, 1990 - Meeting (Bob Stewart, Steve Clark (WHC), Jeff Lerch, Kelly Stalker) with ANF (Chuck Malody, Steve Lockhaven) to discuss WHC's remeasurement of wells for elevation. We provided copies of our "Round 2" data. ANF informed us of their drilling of 4 new wells, giving them 22 wells.
- o August, 1990 - Formal letter to ANF (Frain) informing them of start of Phase 2 activities, and need to investigate "newly identified" South Pit site, using geophysics and soil gas. ALSO THE POTENTIAL NEED TO DRILL ADDITIONAL WELLS ON ANF PROPERTY, LOOKING FOR THE SOURCE OF TCE, IS ADDRESSED
- o August 6, 1990 - Formal letter from ANF transmitting information as agreed earlier (Lambert grid coordinates for each ANF well and sample results)

- August 14, 1990 - Formal DOE letter to ANF (Izatt to Frain) transmitting May 1990 GW sample results and notifying them that planning for Phase 2 of the Remedial Investigation is underway
- o August 16, 1990, Tel/con Bob Stewart to Chuck Malody, with Steve Clark regarding need to cooperate for sampling of TCE, TOC, nitrates, fluorides in third round of sampling, scheduled for latter part of August
- o August 21, 1990, Tel/con Chuck Malody to Bob Stewart. Chuck expressed concern about suite of chemicals being requested for sampling in Round 3. Also wanted to know about DOE plans for Phase 2 of the RI. It was agreed that a meeting would be set-up on this subject
- o August 27, 1990 - Meeting conducted with ANF (participants: EPA/Doug Sherwood, Bob Stewart, Chuck Malody, Steve Clark, and Golder-Don Caldwell, Bill Wright, Doug Morrelle, others) to discuss ANF participation in Phase 2 of the RI. At this meeting it was agreed that ANF would cooperate on soil gas work, geophysics, however, that at this time no wells were to be drilled. It was also agreed that DOE would provide copies of the Phase I RI report, FS 1/2 report and Supplemental Work Plan draft.
- o September 26, 1990 - Formal letter to ANF formally soliciting continued support during Phase 2. Formally documents agreements reached at August 27th meeting. Letter was reviewed in draft by Chuck Malody. Letter documents that concerns of Phase 2 are the TCE contamination in GW and the South Pit site. Requested additional well log information. Copies of letter were sent to EPA/Einan and Ecology/Cline.

Period of Time After Receipt of Regulatory Comments on RI Phase I Report until DOE Receipt of EPA Letter of January 23, 1991

- o October 22, 1990 - Letter from ANF/Frain formally agreeing to geophysics and soil gas sampling on ANF property. Stated that form indemnifying ANF from liability was needed prior to DOE's proceeding with work. Stated that all available well log information had been transmitted previously.
- o November 5, 1991 - Tel/con Bob Stewart to Chuck Malody. Provided DOE permission to set up Golder's trailer on ANF property. Trailer supported geophysics and soil gas investigation; ANF provided electricity at no cost.
- o November 2, 1990 - Tel/con from Gerry Welch, attorney for ANF, to Bob Stewart. Wanted letter from EPA referencing Title I, Section 104 of CERCLA (U. S. Code 42 USC Section 9604) to ANF/Frain. Contacted EPA/Einan about call, was told to call EPA attorney Andy Boyd about request.
- o December 5, 1990 - Letter from DOE Assistant Manager, AME (Leo Little) to ANF/Frain (letter concurred in by OCCCarosino). Letter documented that ANF's requirement that DOE complete an indemnification form had been dropped, based on conversations between respective attorneys, Welch and Carosino. Per ANF request, letter provided legal basis for DOE to pursue Phase 2 investigation on ANF property. CERCLA Section 104(e)(4)(A) and Executive Order 12580 are citations used. Letter advised ANF that drilling to depths of four

feet were required for the soil gas work, and that it was anticipated that vadoze zone and GW drilling would be required "in the near future". Copies were sent to EPA/Einan and Ecology/Cline.

January 23, 1991 - Letter from EPA/Einan to DOE/Stewart. Letter made it clear that DOE was expected to pursue investigation of GW beneath landfill and directed that "information copies of any Notice letters to PRP's under CERCLA" be provided.

Period after Receipt of EPA Letter of January 23, 1991

- o February 5, 1991 - Letter from ANF/Lockhaven to WHC/ Steve Weiss transmitting GW analysis results of samples taken November 1, 1990. Sample results were results of testing ANF had performed for "background reference".
- o February 19, 1991 - Tel/con, Bob Stewart (with Steve Clark, Wendell Greenwald) with Bob Carosino, to Glen Hardcastle. Call resulted in later call to DOE HQ attorney, Steve Miller, Department of Justice attorney, Steve Rogers by Carosino regarding legal requirements of DOE.
- o February 23, 1991 - DOE-RL response to January 23, 1991 EPA letter. In letter DOE agreed to call a meeting of ANF, EPA, and Ecology to discuss future work regarding delineation and remediation of the plume of contaminated groundwater beneath the Horn Rapis Landfill and ANF's property. We also agreed to participate in the assessment of the uranium and nitrate plume beneath the landfill and ANF's property.
- o February 28, 1991 - DSI from Bob Stewart to Chuck Malody transmitting requested documents to ANF (FS1/2 Report (Draft), EPA comments on FS1/2 Report, EPA comments and DOE responses to comments on the RI Phase 1 Report, EPA letter of
- o March 5, 1991 - Meeting with ANF conducted per letter of February 28, 1991. ANF wanted to meet separately from regulators. Agreements from this meeting included conducting a follow-up technical briefing. Meeting minutes were taken and a draft provided to Einan on March 8th.
- o March 26, 1991 - Technical briefing conducted. Meeting included 26 attendees, including several attorneys from ANF. Purpose of meeting was to brief ANF on technical aspects of the 1100-EM-1 RI/FS. Meeting Minutes were taken, although ANF has subsequently refused to sign any meeting minutes. Unsigned minutes have been provided to EPA/Ecology. Preparation of formal PRP letter from DOE to ANF was discussed; (At the time DOE-RL, Office of Chief Counsel, was working with EPA Region 10 attorney and DOE-HQ attorney to finalize letter)
- o March 28, 1991 - CC Mail Message from Bob Stewart to USACE and WHC to start developing a strategy as to how the ground water investigation could be conducted with and without ANF voluntary participation
- o March 28, 1991 - Response from USACE/WHC identifying activities, agreements, and technical information (about wells) needed from ANF for the RI Phase II GW investigation. It was noted that EPA/Ecology must be satisfied with the ANF monitoring wells for the data to be used

- o March 29, 1991 - Telcon DOE-RL/OCC (Jim Bauer) to Scott Slaughter, hired ANF attorney from Washington D. C. Slaughter indicated that ANF might be willing to reach an agreement to share costs and perform other investigative work without admitting anyh responsibility as a PRP. BAUER told Slaughter that DOE was a number of weeks away from sending out a "notice" letter and that we would probably send it out even if ANF agreed to do some worko April 1, 1991 - Based on information obtained from DOE-RL/OCC (Jim Bauer), Bob Stewart telephoned EPA/Einan regarding proposal by ANF attorney to hold meeting in Washington, D.C. with Department of Justice
- o April 3, 5, 1991 - Extensive information request from Stoel, Rives, Boley, Jones & Grey (attorneys contracted by ANF) received (Responses sent at different times; most extensive sent May 15, 1991)
- o April 9, 1991 - Tel/con from DOE-RL/OCC (Bauer) to Bob Stewart summarizing results of DC meeting with Department of Justice. Results were agreement in principal, with ANF wanting to wait in starting cooperative effort until Insurance issues resolved. Discussion of cost recovery with no agreements
- o April 19, 1991 - Meeting conducted at ANF to exchange technical information. Listing of detailed information needed provided to ANF. Lengthy discussion of info available on well construction. It was agreed that ANF would provide a complete set of all information previously provided; in return, the DOE would provide additinal documentation requested
- o April 29, 1991 - Tour of Horn Rapids Landfill led by USACE, Wendell Greenwald for ANF Chuck Malody, with a Mr. Clark, a retired foreman of the "Transportation Department at Hanford". Clark had worked at Hanford from 1954 until his retirement about four years ago and appeared know a considerable amount of knowlege about past disposal at the landfill.
- o Mid-May - Draft of agreement prepared by ANF mailed to DOE-RL/OCC. Malody notified Stewart that ANF seeking new contractor because of potential conflict of interest problems by Hart Crowser
- o June 6, 1991 - Formal comments provided by DOE-RL/OCC on proposed draft agreement from ANF were transmitted to ANF attorney, Gerry Welch, Bellevue, WA. Copy Coverage to EPA and Ecology
- o June 26, 1991 - Meeting conducted at ANF to discuss details of working together in investigation of GW. Agreement reached for ANF to prepare own work plan, and then to integrate with DOE plan. ANF agreed to meeting with EPA/Ecology.
- o July 1, 1991 - Specific information provided to ANF by USACE regarding Groundwater information investigation needs
- o July 17, 1991 - ANF pareticipated in UMM, provided briefing on status of ANF efforts
- o July 30, 1991 - GW sampling results infor provided to ANF

# DISTRIBUTION COVERSHEET

<b>Author</b> SH Wisness/RL	<b>Addressee</b> PE Day/USEPA EL Nord/Ecology	<b>Incoming Correspondence No.</b> 9103726 (XREF 9103710)
<b>Subject</b> Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Number M-15-91-2, Revision to 1100-EM-1 Operable Unit (OU) Milestones M-15-01B and M-15-01C		

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